Fig.1

Fig.2

Fig.3

Fig.4

Fig.5

RMe₂Ge S
$$n$$
-BuLi, -50°C; ICH₂CH₂I, RMe₂Ge S I dark (98%) Hex

Fig.6

Fig.7

RMe₂Ge S X

Hex

Hex

$$ep 2 = 6^2 X = SiMe_3$$
 $ep 3 = 6^2 X = H$
 $ep 3 = 7^2 X = I$
 $ep 3 = 6^2 X = H$
 $ep 3 = 6^2 X = H$

step 1: CsF, DFM, 60°C (99%); step 2: n - BuLi, -50°C; ICH₂CH₂I (98%) step 3: 9, Pd(PPh₃)₄, DFM, 60°C, double-couple: repeat steps 3-4 (>90%)

Hex

Fig.8

RMe₂Ge
$$S$$
 SiMe₃ Y S Z $Y^E = H$, I, Br, Cl and other E $Z^E = H$, I, Br, Cl and other E

Fig.9

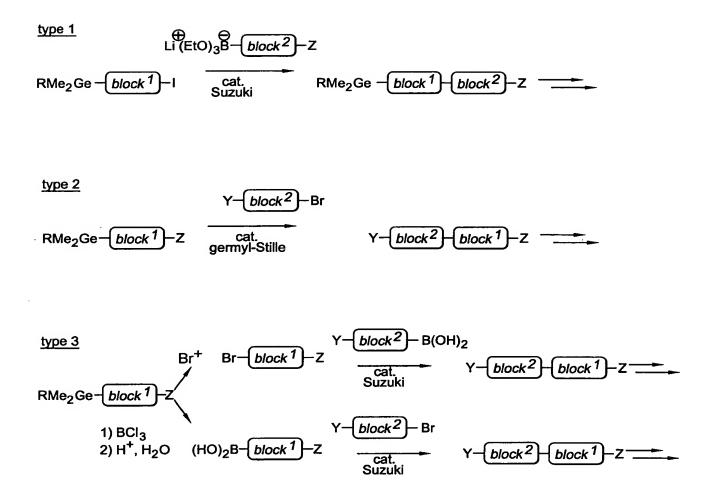


Fig.10

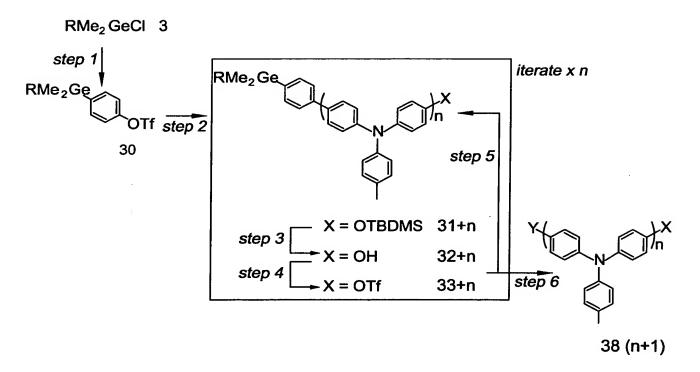


Fig.11

Fig.12

Fig.13

Fig.14

EtO OH EtO OTf
$$\frac{Tf_2O}{Pyridine\ 0^{\circ}C,\ 30\ min}$$
 33

Fig.15

Fig.16

Fig.17